

# Apollo/68080 Core

## 100% 680x0 compatible processor for retrogamers



Apollo Core is the natural and modern evolution of latest 680x0 processors. It's 100% code compatible, corrects bugs of 680x0 designs and adds on top most of the cool features which were invented the years after.

### Apollo core : a game changer

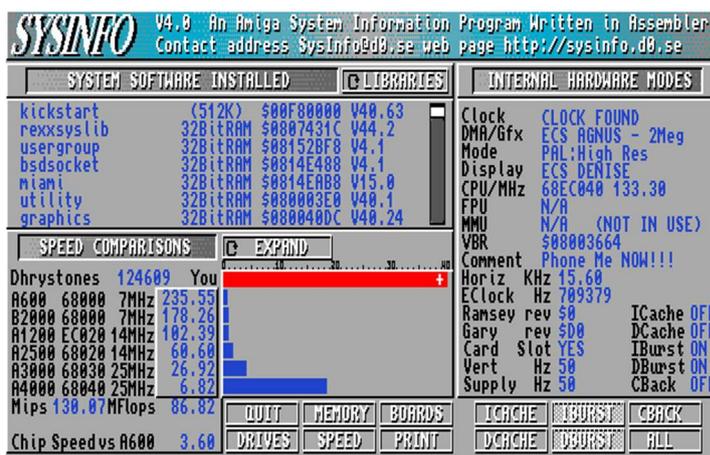
Back in the 80s, Motorola was leading the market with his 680x0 CISC processors range, selling it to big companies like HP, Apple, Atari, Commodore, NeXT, SEGA and others.

Today, 680x0 is still used by industrial machines, planes industry, cars vendors and is still used by retrocomputing fans around the world.

When put in an FPGA, the Apollo offers a good combination of moderate FPGA space consumption and excellent performance. Apollo surpasses the performance of 68060 ASIC by far - even when only using low cost FPGA.

### Performance Amiga-land deserves

Bored of tiresome 68020 performance, of expensive 68060 accelerators and not feeling same emotions with emulation? Apollo core resolve all those topics.



### Ready for the future

Unlike old processor stocks getting more and more difficult to find, Apollo core can be ported to industry standard FPGA, getting speedups every time it gets on a more powerful chip.

### Core Features

#### Faster Amiga CPU ever

Faster than a 68060 at 100MHz, capable of Next Gen workloads (watching movies, listening to digital music, browsing web, etc.)

#### Digital Video Output

32-Bit HDMI output from RTG and SAGA. You can now plug in your new shiny LCD screen.

#### User upgradable

Thanks to FPGA technologies, new cores are uploaded directly from your Amiga, giving you new functionalities and performances when they hit the street.

#### Affordable

Apollo based accelerators are cost efficient and brings twice as much performance at fraction of the cost of an old accelerator.

#### Loads of memory

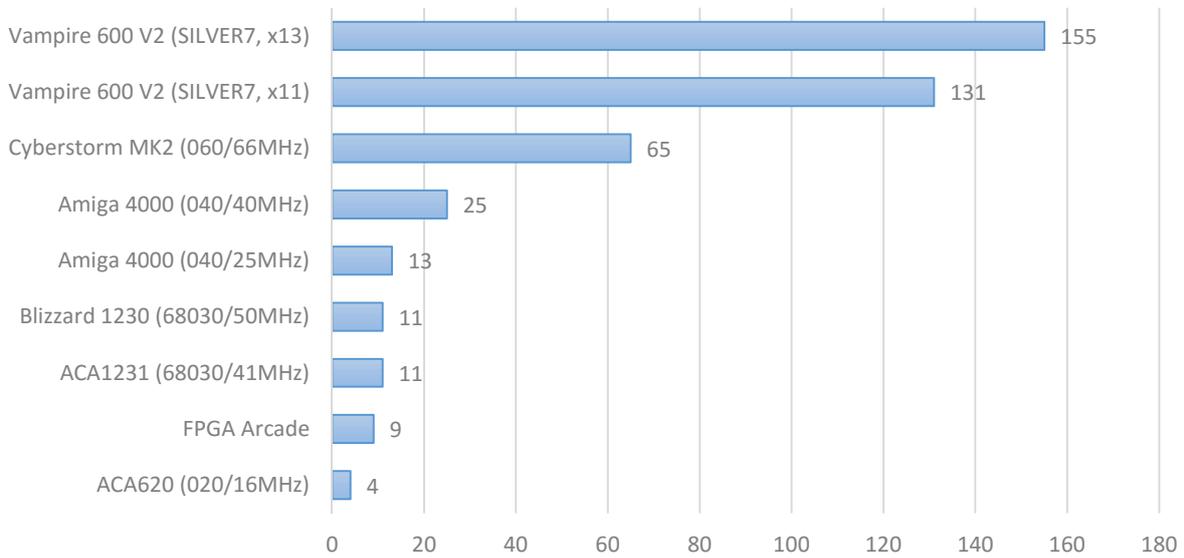
Apollo based accelerators all offers at least 128MB of FastRAM.

#### Faster storage

Use your preferred storage solution (MicroSD, Compact Flash, etc.) to get fastest amiga experience, up to 11MB/s.

## Performance comparison against other Amiga hardware

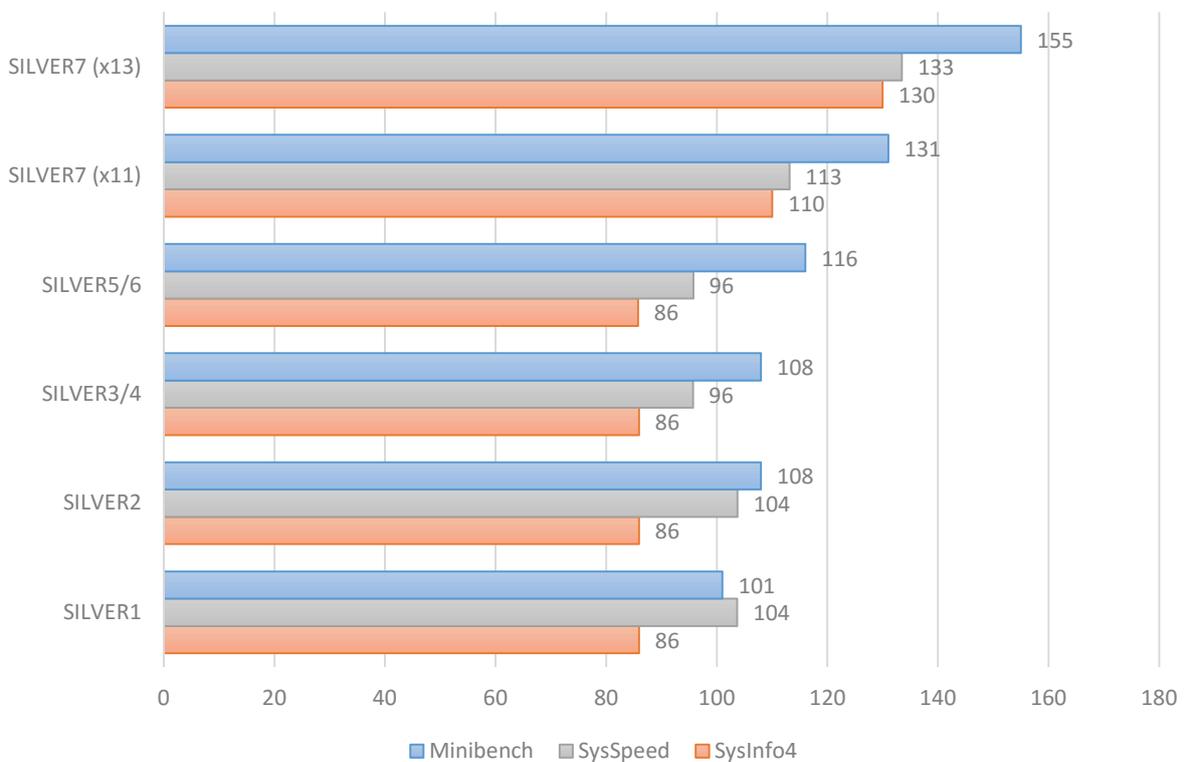
Apollo Performance Comparison Chart (Minibench MIPS)



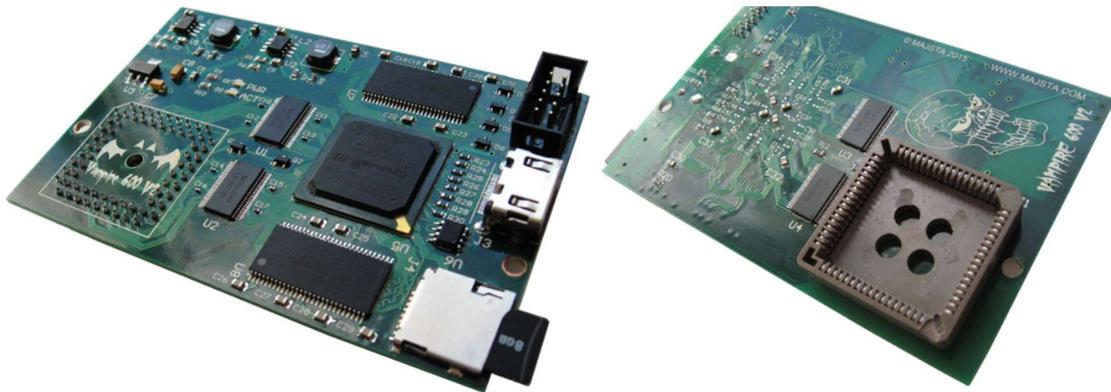
## Performance increase over releases

Since start beginning in January 2016, Apollo core evolved to bring even more performance to end-users for free.

Apollo Core Performance Evolution Chart



## Apollo core based accelerators line-up\*



	V600 V2	V500	V1200	Standalone
<b>Compatible with</b>	A600	A500, A1000, A2000	A1200	-
<b>ETA</b>	Released	Q3'16	Q4'16	TBA
<b>FPGA</b>	Altera Cyclone 3	Altera Cyclone 3	TBA	TBA
<b>FastRAM</b>	128MB	128MB	TBA	TBA
<b>Storage</b>	MicroSD	MicroSD, IDE	TBA	TBA

\*Features and specifications subject to change without notice.

## People who made Apollo core possible

### Core team

Gunnar "BigGun" von Boehn (CPU Designer)  
 Christoph "ceiach" Hoehne (CPU Designer)  
 Igor "Majsta" Majstorovic (Hardware Designer)  
 Brian "kipper2k" Robotham (Hardware Designer)

### Test team

cgugl, flype, freemilk, gmlsmurf, grond, mfilos, Ng, ShK and TuKo

### Developers

Jason McMullan (SAGA Drivers)

## Get in touch with Apollo team

### Internet Chat Relay

Server : irc.freenode.org Channel : #apollo-team

### Facebook

<https://www.facebook.com/apolloaccelerators/>

## For more information, visit

About core : <http://www.apollo-core.com/>

About accelerators : <http://www.apollo-accelerators.com/>

Official Wiki : <http://www.apollo-accelerators.com/wiki/>